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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/987,707	11/15/2001	Alan J. Lipton	37112-175340	7303

26694 7590 01/03/2008

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EXAMINER

VO, TUNG T

ART UNIT	PAPER NUMBER
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2621

MAIL DATE	DELIVERY MODE
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01/03/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/987,707	Applicant(s) LIPTON ET AL.	
	Examiner Tung Vo	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-12,14-19,21,24,25,27-30,33-35,37-39 and 41-55 is/are pending in the application.
 4a) Of the above claim(s) 2,3,13,20,22,23,26,31,32,36 and 40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4-12,14-19,21,24,25,27-30,33-35,37-39 and 41-55 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-12, 14-19, 21, 24, 25, 27-30, 33-35, 37-39 and 41-55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Madrane (US 6,573,907) and "Segmentation of People in Motion" by Shio et al, Proc. IEEE, vol. 79, pp 325332, 1991.

Re claims 1, 25, and 27, Madrane teaches a computer-readable medium (fig. 2) having software stored thereon for operating a video surveillance system (col. 3, lines19-22; "Segmentation of People in Motion" by Shio et al.) for operating the video surveillance comprising:

(A) a code segments for determining identifying one or more user-defined event discriminators, each user-defined event discriminator to detect an occurrence of a user-defined event in a video of the video surveillance system (col. 3, lines19-22; "Segmentation of People in Motion" by Shio et al., Shio describes the surveillance system is used in the Madarane), each user-defined event comprising description at least one object engaged in an activity in the video, a description of at least one object engaged in an activity having one or more spatial attributes in the video, a description of at least one object engaged in an activity having one or more temporal attributes in the video, or a description of at least one object engaged in an activity having one or

more spatial attributes and one or more temporal attributes in the video, the object being an item of interest in the video (fig. 49, Who, What, Where, and Association);

(B) a code segments (fig. 11) for extracting video primitives (col. 17-line 35-col. 18, line 61) from the video regardless of what or when event discriminators are defined, each video primitive extracted being independent of any user-defined event described by the user-defined event discriminators wherein extracting video primitives comprises:

(1) identifying one or more objects in the video to obtain identified objects (col. 18, lines 29-46), each object being an item of interest in the video wherein identifying one or more objects (col. 18, lines 46-61) comprises at least one of:

- (a) detecting one or more objects in the video (col. 18, line 30);
- (b) tracking one or more objects in the video (col. 18, lines 34-37); or
- (c) classifying one or more objects in the video (col. 18, lines 37-40); and

(2) identifying at least one video primitive for each identified object in the video independent of any user-defined event described by any user-defined event discriminator (120 and 109 of fig. 11; figs. 6 and 7B; col. 18, line 62-col. 19, lines 18), each video primitive describing a property of one of the identified object, each property being an observable attribute of the identified object in the video (col. 19, line 20-col. 20, lines 33); and

(C) code segments for checking (203-214 of fig. 12) the extracted video primitives (wherein the extracted video primitives are stored in the storage unit 119 of fig. 11) against at least one of the user-defined event discriminators (Who, What, Where, Association of fig. 49, Who, What, Where, and Association are inputted by the user (205 of fig. 12) for searching the extracted video primitives) to determine whether any user-define events (a bird is flying within

video primitives or a cat is jumping within video primitives) described by the checked user-defined event discriminators (Who = a cat, What = jumping, Where = inside a room, Association = cat with black eyes enters the room and starts to jump) occurred in the video, wherein checking the extracted video primitives comprises;

(1) comparing (208 of fig. 12) the properties of the video primitives (bird moving) with the description of the user-defined event of one of the user-defined event discriminator (Who, What, Where, and Association); and

(2) determining a user-defined event occurred in the video according to one of the user-defined event discriminators if the properties of the video primitive match the description of the user-defined event of one of the user-defined event discriminators (col. 31, lines 25-60);

wherein the code segments for extracting video primitives (fig. 11) are different from the code segments for checking the extracted video primitives (fig. 12).

Re claim 4, Madrane further teaches code segments for archiving the extracted video primitives (119 of fig. 1); wherein the archived video primitives are accessible without reprocessing the video (203-114 of fig. 12, user 205).

Re claims 5 and 24, Madrane further teaches code segments for undertaking a response based on the checked extracted video primitives (209 of fig. 12, viewing).

Re claim 6, Madrane further teaches wherein the response comprises initiating another sensor system (col. 3, lines 19-22; camera).

Re claims 7-12, and 33, Madrane further discloses code segments for calibrating the video surveillance system; wherein the code segments for calibrating comprise code segments

for self-calibrating the video surveillance system; wherein the code segments for self-calibrating comprise: code segments for detecting as least one object in a source video (the camera is detecting the object); and code segments for tracking the object; wherein the code segments for detecting at least one object comprise: code segments for detecting at least one object via motion of the object; and code segments for detecting at least one object via change in a background model; wherein the code segments for self-calibrating (pan, tilt, or zoom) comprise: code segments for identifying track able areas; and code segments for identifying typical sizes of typical objects; wherein the code segments for calibrating comprise: code segments for manual calibration; code segments for semi-automatic calibration; and code segments for automatic calibration (col. 3, lines 10-22, see entire article as provided; see also fig. 3).

Re claim 14, Madrane further teaches wherein at least one user-defined event comprises a description of at least one object engaged in an activity in the video (fig. 49).

Re claims 15, Madrane further teaches wherein g least one user-defined event comprises a description of at least one object engage in an activity having one or more spatial attributes in the video (fig. 49)

Re claim 16, Madrane further teaches wherein at least one user-defined event comprises a description of at least one object engaged in an activity having one or more temporal attributes in the video (fig. 49).

Re claim 17, Madrane further teaches wherein at least one user-defined event comprises a description of at least one object engaged in an activity having one or more spatial attributes and one or more temporal attributes in the video (fig. 49).

Re claims 18 and 35, Madrane further discloses wherein at least one user-defined event comprises: at least one alarm (col. 3, lines 19-22, see article, page 330, ccd camera is used for security system which is an alarm).

Re claim 19, Madrane further teaches wherein the video primitives are from at least one of a video sensor or another sensor (col. 3, lines 10-22).

Re claim 20, Madrane further teaches the computer system comprising the computer-readable medium of claim 1 (fig. 2).

Re claim 28, Madrane further teaches wherein the apparatus comprises application-specific hardware to emulate a computer and/or software (fig. 2).

Re claims 29 and 34, Madrane further teaches wherein at least one user-defined event discriminator is further checked against non-video primitives (fig. 1A).

Re claim 30, Madrane further teaches further comprising code segments for determining identifying the one or more user-defined event discriminators using a user interface (4 of fig. 2, fig. 49).

Re claims 37- 39, Madrane further teaches wherein the video primitives are at least seven of the following: a classification, a size, a shape, a color, a texture, a position a velocity, a speed, an internal motion, a motion, a salient motion, a feature of a salient motion, a scene change, a future of a scene change, or a pre-defined model (fig. 3).

Re claim 41, Madrane further teaches code segments for determining one or more additional user-defined event discriminators (fig. 49); and code segments for checking extracting event occurrences from the archived video primitives at least (fig. 12), one of the one or more additional user-defined event discriminators (fig. 49).

Re claim 42, Madrane further teaches wherein the video primitives include primitives includes at least one of the following: a size; a shape; a color; a texture; a position; a velocity; a speed; an internal motion; feature of a salient motion; or a feature of a scene change (fig. 3).

Re claim 45, Madrane further teaches (D) archiving the extracted video primitives; wherein the archived video primitives are accessible without reprocessing the video (119 of fig. 11).

Re claim 46, Madrane further teaches wherein at least one user-defined event comprises a description of at least one object engaged in an activity in the video (fig. 49).

Re claims 47-49, Madrane further teaches wherein at least one user-defined event comprises a description of at least one object engaged in an activity having one or more spatial attributes in the video (fig. 49).

Re claims 50, Madrane further teaches (D) means for archiving the extracted video primitives (119 of fig. 11); wherein the archived video primitives are accessible without reprocessing the video (fig. 12).

Re claims 43, 51, and 52, see analysis in claims 1, 25, 27, and 50.

Re claims 53, 54, and 55, see analysis in claims 1, 25, 27, and 50. Madrane further teaches more than one user-defined event discriminators that would obviously determined by a user (figs. 11 and 12 and 49), (E) code segments for determining one or more second, user-defined event discriminators, each second user-defined event discriminator to detect an occurrence of a user-defined event in the video of the video surveillance system, each user-defined event comprising a description of at least one object engaged in an activity in the video, a description of at least one object engaged in an activity having one or more spatial attributes in

the video, a description of at least one object engaged in an activity having one or more temporal attributes in the video, or a description of at least one object engaged in an activity having one or more spatial attributes and one or more temporal, attributes in the video, the object being an item of interest in the video (fig. 49); (F) code segments for accessing the archived video primitives corresponding to a portion of the video (fig. 12); wherein the accessed video primitives are checked, against at least one of the second user- defined event discriminators without reprocessing the portion of the video (viewer in figure 12).

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Liang et al. (US 6,678,413) discloses system and method for object identification and behavior characterization using video analysis.

Contact Information

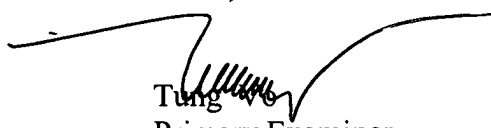
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung Vo whose telephone number is 571-272-7340. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on 571-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Tung
Primary Examiner
Art Unit 2621